CLAIMS

1. Axial pseudo-isothermal chemical reactor (1), comprising a substantially cylindrical shell (2), with vertical axis (A-A), closed at the opposite ends by upper (4) and lower (3) bottoms respectively, a reaction zone (8), defined in said shell (2) and in which a catalytic bed (11) and a plurality of flat, boxed, plate-shaped heat exchangers (12), having the shape of a parallelepiped and having vertical long sides (20) and short sides (21) parallel to a same diameter of the shell (2), are supported, characterized in that said exchangers (12) are all identical and in that their short sides (21) have the ends arranged on imaginary cylindrical surfaces (22, 23, 24, 25, 26, 27) having the same radius as the inner radius of the shell (2) and centers all arranged on a same diameter of the shell (2), wherein at least two of said exchangers (12) are arranged on a same imaginary cylindrical surface of said imaginary cylindrical surfaces (22, 23, 24, 25, 26, 27), said plurality of heat exchangers (12) centrally defining an axial manhole passage (19).

2. Chemical reactor according to claim 1, characterized in that said exchangers (12) are arranged on equally spaced parallel planes.